CITY OF HUGHSON

RESIDENTIAL AND NON-RESIDENTIAL CHECKLIST FOR PERMITTING ELECTRIC VEHICLES AND ELECTRIC VEHICLE SERVICE EQUIPMENT

Please complete the following information related to permitting and installation of Electric Vehicle Service Equipment (EVSE) as a supplement to the application for a building permit. This checklist contains the technical aspects of EVSE installations and is intended to help expedite permitting and use for electric vehicle charging.

Upon this checklist being deemed complete, a permit shall be issued to the applicant. However, if it is determined that the installation might have a specific adverse impact on public health or safety, additional verification will be required before a permit can be issued.

This checklist substantially follows the "Plug-In Electric Vehicle Infrastructure Permitting Checklist" contained in the Governor's Office of Planning and Research "Zero Emission Vehicles In California: Community Readiness Guidebook" and is purposed to augment the guidebook's checklist.

<table>
<tr><td colspan="2">Job Address:</td><td>Permit No.</td></tr>
<tr><td colspan="3">Construction Type: _____ Single-Family _____ Multi-Family _____ Commercial (single business)
_____ Commercial (multiple businesses) _____ Mixed-Use
_____ Other Explain: _____</td></tr>
<tr><td colspan="3">Location and Number of EVSE to be Installed:
_____ Garage _____ Parking Lot _____ Street Curb _____ Other Explain: _____</td></tr>
<tr><td colspan="3">Description of Work:</td></tr>
<tr><td colspan="3">Applicant Name:</td></tr>
<tr><td colspan="3">Applicant Phone and Email:</td></tr>
<tr><td colspan="2">Contractor Name:</td><td>License No. and Type:</td></tr>
<tr><td colspan="3">Owner Name:</td></tr>
<tr><td colspan="3">Owner Phone and Email:</td></tr>
<tr><td colspan="3">Owner's Signature: _____</td></tr>
</table>

EVSE Charging Level: _____ Level 1 (120V) _____ Level 2 (240V) _____ Level 3 (480V)
Maximum Rating (Nameplate) of EV Service Equipment = _____ kW
Voltage EVSE = _____ V | Manufacturer of EVSE: _____
Mounting of EVSE: _____ Wall Mount _____ Pole Pedestal Mount _____ Other Explain:

System Voltage: _____ 120/240V, 1ϕ, 3W _____ 120/208V, 3ϕ, 4W _____ 120/240V, 3ϕ, 4W _____ 277/480V, 3ϕ, 4W _____ Other Explain: _____
Rating of Existing Main Electrical Service Equipment = _____ Amperes
Rating of Panel Supplying EVSE (if not directly from Main Service = _____ Amps
Rating of Circuit for EVSE: _____ Amps / _____ Poles
AIC Rating of EVSE Circuit Breaker (if not Single Family, 400A) = _____ A.I.C

Specify Either Connected, Calculated or Documented Demand Load for Existing Panel
1. Connected Load of Existing Panel Supplying EVSE = _____ Amps
2. Calculated Load of Existing Panel Supplying EVSE = _____ Amps
3. Demand Load for Existing Panel or Service Supplying EVSE = _____ Amps
Total Load (Existing plus EVSE Load) = _____ Amps
For single-family dwellings, if the existing load is not known by any of the above methods, consistent with the "Single-Family Residential Permitting Application Example" in the Governor's Office of Planning and Research "Zero Emission Vehicles In California: Community Readiness Guidebook", please complete the attached "Plug-In Electric Vehicle Load Calculator for Level 2 Charging.

EVSE Rating _____ Amps x 1.25 = _____ Amps = Minimum Ampacity of EVSE Conductor - # _____ AWG
For Single-Family: Size of Existing Service Conductors = # _____ AWG or kcmil **<OR>** Size of Existing Feeder Conductor Supplying EVSE Panel = # _____ AWG or kcmil

I hereby acknowledge that the information presented is a true and correct representation of existing conditions at the job site and that any causes for concern as to life-safety verifications may require further substantiation of information.

Signature of Permit Applicant: _____ Date: _____

PLUG-IN ELECTRIC VEHICLE LOAD CALCULATOR FOR LEVEL 2 CHARGING

INSTRUCTIONS: Review the list of electrical loads in the table below and check all that exist in your home (please do not forget to include the proposed Level 2 charger). For each item checked, fill in the corresponding "Watts Used" (refer to the "Typical Usage" column for wattage information). Add up all of the numbers that are written in the "Watts Used" column and write that number in the "TOTAL WATTS USED" box at the bottom of the table, then go to the next page to determine if your existing electric service will accommodate the new loads.

Loads shown are rough estimates; actual loads may vary. For a more precise analysis, use the nameplate ratings for appliances and other loads and consult with a trained electrical professional.

Check All Applicable Loads	Description of Load	Typical Usage	Watts Used
GENERAL LIGHTING AND RECEPTABLE OUTLET CIRCUITS			
☐	Multiply the square footage of house x 3	3 watts / sq. ft.	
KITCHEN CIRCUITS			
☐	Kitchen circuits	3,000 watts	
☐	Electric oven	2,000 watts	
☐	Electric stove top	5,000 watts	
☐	Microwave	1,500 watts	
☐	Garbage disposal under kitchen sink	1,000 watts	
☐	Automatic dish washer	3,500 watts	
☐	Garbage compactor	1,000 watts	
☐	Instantaneous hot water at sink	1,500 watts	
LAUNDRY CIRCUITS			
☐	Laundry circuit	1,500 watts	
☐	Electric clothes dryer	4,500 watts	
HEATING AND AIR CONDITIONING CIRCUITS			
☐	Central heatinsg and air conditioning	6,000 watts	
☐	Window mounted air conditioning	1,000 watts	
☐	Whole-house or attic fan	500 watts	
☐	Central electric furnace	8,000 watts	
☐	Evaporative cooler	500 watts	
OTHER ELECTRICAL LOADS			
☐	Electric water heater (storage type)	4,000 watts	
☐	Electric tankless water heater	15,000 watts	
☐	Swimming pool or spa	3,500 watts	
ELECTRIC VEHICLE CHARGER CIRCUIT			
	Level 2 electric vehicle charger wattage rating		
		TOTAL WATTS USED	_____

INSTRUCTIONS: Using the "TOTAL WATTS USED" number from the previous page, check the appropriate line in column 1 and follow that line across to determine the minimum required size of the electrical service panel shown in column 3. In column 4, write in the size of the electrical service panel (main breaker size). If your existing service panel (column 4) is smaller than the minimum required size of the existing service (column 3), then you will need to install a new upgraded electrical service panel to handle the added electrical load from the proposed Level 2 charge.

The table below is based on CEC 220.83(A), 230.42 and Annex D.

1	2	3	4
Check the Appropriate Line	TOTAL WATTS USED	Minimum Required Size of Existing 240-Volt Electrical Service Panel	Identify the Size of Your Existing Main Service Breaker (Amps)
☐	Up to 48,000	100 amps	
☐	48,001 to 63,000	125 amps	
☐	63,001 to 78,000	150 amps	
☐	78,001 to 108,000	200 amps	
☐	108,001 to 123,000	225 amps	

Note: The size of your existing service (column 4) MUST be equal to or larger than the minimum required size (column 3) or a new larger electrical service panel will need to be installed.

STATEMENT OF COMPLIANCE

By my signature, I attest that the information provided is true and accurate.

Job Address:

_____

Signature (applicant): _____ Date:

_____

In addition to this document, applicant will also need to provide a copy of the manufacturer's installation literature and specifications for the Level 2 charger to be installed.

Note: This is a voluntary compliance alternative and you may wish to hire a qualified individual or company to perform a thorough evaluation of your electrical service capacity in lieu of this alternative methodology. Use of this electrical load calculation estimate methodology is at the user's risk and carries no implied guarantee of accuracy. Users of this methodology and these forms are advised to seek professional assistance in determining the electrical capacity of the service panel.